

# The Interaction of Temporal and Modal Auxiliaries in Counterfactual Contexts in Swedish

CECILIA FALK

*University of Stockholm*

cfalk@nordiska.su.se

**Abstract:** In counterfactual contexts, the Swedish modal auxiliaries *kunna* ‘can,’ *skola* ‘shall,’ and *böra* ‘ought’ can be combined with the temporal auxiliary *ha* ‘have’ in either combination within the verbal complex, i.e. both sequences [*ha*-PRET + modal-PTC + verb-INF] and modal-[PRET + *ha*-INF + verb-PTC] are acceptable. In both cases, the action of the main verb is denied. In this paper, I argue that the common counterfactual meaning is obtained through different mechanisms, depending on the type of inferences and implications triggered by the modals. The ordering variation is not available for *måste* ‘must,’ where the sequence [modal-PRET + *ha*-INF + verb-PTC] cannot receive a counterfactual meaning. I will show that this is because *måste* triggers other inferences and implications compared to the three other modals.

## 0. Introduction

In this paper I will present data from Swedish on what seems to be a free variation in the order of two auxiliaries. An example is given in (1):

- (1) a. Han hade kunnat hjälpa mig.  
he had-PRET could-PTC help-INF me  
b. Han kunde ha hjälpt mig.  
he could- PRET have-INF helped-PTC me  
*‘He could have helped me.’*

Without any further context (1a,b) mean more or less the same thing, i.e. ‘he could have helped me (but he did not)’ (cf. SAG 4:304). I will try to show that this variability is not free in syntax. Rather, specific inferences and implications give two distinct syntactic structures a very similar meaning. I use the term “inference” as a pragmatic notion that may be cancelled by the speaker. An inference can be conventionalized and thus be part of the semantics of a linguistic form, e.g. a word or a combination of words, for which case I will use the term “implication” (cf. Hopper and Traugott, 1993:63ff.).

## 1. Modals and verb complexes in Swedish

Some basic information about modals and verb complexes in Swedish is necessary before I present the relevant data.

*Kunna* ‘can’ in example (1) expresses ability or possibility. The other modals that will be considered here are *böra* ‘ought’ (strong recommendation), *skola* ‘shall’ (strong obligation) and *måste* ‘must’ (strong obligation). In addition to the root reading, the finite forms of all these modals also have an epistemic reading.

*Kunna*, *skola* and *måste* are (partly) available in their infinitive forms, in contrast to their English cognates *can*, *shall* and *must*. The same is true for *böra*, which has no cognate in English. The infinitive forms will not be of relevance here. However, it is of great importance to this article that they have a past participle form (which are marginal in some cases, though; see the next section). The participle is used as the complement of the anterior auxiliary *ha* ‘have,’ as demonstrated in the comparison of (2a) with (2b):

- (2) a. Han har kunnat hjälpa mig många gånger.  
 he has-PRES could-PTC help-INF me many times  
 ‘He has been able to help me many times.’
- b. Han kan ha hjälpt mig med detta.  
 he can-PRES have-INF helped-PTC me with this  
 Root reading: ‘He has the ability/possibility to have helped me with this (in some near future).’  
 Epistemic reading: ‘Possibly, he has helped me with this.’

There is a clear difference in meaning between (2a) and (2b). In (2a) the subject referent’s possibility is temporally fixed by *många gånger* ‘many times’ and set in a time before the reference time, i.e. the present. In the root reading of (2b), this ability/possibility holds for the present, whereas the act of helping will have taken place at some point in the future. However, without any further context, the epistemic reading is more intuitive.

It is possible to create contexts where the sentences in (1) have a purely temporal meaning, just as the past time meaning in (2a) or the root reading in (2b). In this case, they have the same difference in meaning that we can observe in (2). The topic of this article, however, is the (more intuitive) interpretation, according to which they mean about the same thing. In other words they are counterfactual, in the sense that the speaker implies that the subject referent did not help.

As we proceed, I will present other properties of the modals under investigation that are of importance for the analysis.

## 2. The data

In this section I will show that the variation in (1) is possible also with *böra* ‘ought’ and *skola* ‘shall,’ but not with *måste* ‘must,’ where the two orders will get different interpretations.

*Bort*, the past participle of *böra*, is somewhat obsolete in Modern Swedish, and not all speakers accept (3a) as grammatical (cf. SAG 4:294). Speakers who do accept this form agree

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that (3a,b) are more or less synonymous (disregarding the epistemic reading, which is possible only in (3b), and some more far-fetched purely temporal readings):<sup>1</sup>

- (3) a. Han hade bort vara färdig i torsdags.  
 he had-PRET ought-PTC be-INF finished last-Thursday
- b. Han borde ha varit färdig i torsdags.  
 he ought-PRET have-INF been-PTC finished last-Thursday  
 ‘He should have been done last Thursday.’

The intuitive reading of both sentences is again the counterfactual one, implying that he was not done last Thursday.

*Skolat*, the past participle of *skola* ‘shall,’ is no longer used in Modern Swedish. Example (4a) has been taken from a newspaper article from the early 20<sup>th</sup> century and has an old-fashioned ring to it. Today, the meaning of (4a) would instead be expressed with the opposite order, as shown in (4b). In informal speech, however, a new past participle form, *skullat*, is emerging. (4c) has been obtained from the search engine google.com. It appears that the form is quite common on the internet:

- (4) a. Finska båten Oihinna [...] hade skolat [...] vara här klockan 9.  
 Finnish ship-DEF Oihinna had-PRET should-PTC be-INF here clock- DEF 9  
 ‘The Finnish ship Oihinna should have been here at 9 o’clock.’
- b. Båten skulle ha varit här klockan 9.  
 ship-DEF should-PRET have-INF been-PTC here clock- DEF 9  
 ‘The ship should have been here at 9 o’clock.’
- c. Så hade den skullat se ut enligt mig.  
 so had-PRET it should-PTC look-INF PRT according me  
 ‘In my opinion, it should have looked like this.’

In (4a,b) it is implied that the boat had not arrived at 9 o’clock, in (4c) that “it” did not look ‘like this.’

So far I have shown that the order of the modals *kunna*, *böra*, *skola* and the anterior *ha* seems to be free in counterfactuals: Both sequences [modal + *ha*] and [*ha* + modal] render a counterfactual meaning. Note that the verb forms used throughout follow the requirements imposed by the governing verb: *Ha* is always followed by a past participle (be it a modal or a main verb), whereas a modal is always followed by an infinitive (be it *ha* or a main verb).

The modal *måste* ‘must’ behaves differently. First, the form is identical in the present and the past tense.<sup>2</sup> Second, there is a clear difference in meaning between the two orderings:

<sup>1</sup> According to SAG both (3a) and (3b) can have an epistemic meaning. However, the description of this meaning includes a counterfactual aspect:

[...] talaren har kunnat konstatera att satsinnehållet faktiskt inte stämmer med den slutsats han har dragit [...]

‘The speaker has been able to realize that the content of the sentence does not agree with his own conclusion.’ SAG (4:292)

- (5) a. I så fall hade han måst ta paraplyet.  
 in that case had-PRET he must-PTC bring-INF umbrella-DEF  
*'In that case, he would have had to bring the umbrella.'*
- b. I så fall måste han ha tagit paraplyet.  
 in that case must-PRES/PRET he have-INF brought-PTC umbrella-DEF  
*'I am fairly sure that he (had) brought the umbrella.'*

We find a counterfactual reading in (5a), whereas only an epistemic reading is available in (5b).

Thus we face two issues that require an explanation: First, why do we sometimes get a free ordering variation? Below, I will assume that the order is not free and that different orders usually trigger different meanings: For the modals under investigation not only a root versus an epistemic meaning, but also different temporal meanings (see the discussion around 2). The seemingly synonymous pairs in (1), (3) and (4a,b) must therefore be accounted for. Second, if there is a plausible explanation for the first issue, why is it not applicable to *måste*?

Before we turn to possible answers to these questions, we need to take a look at the concept of “counterfactual meaning” in some more detail.

### 3. Counterfactual meaning

Counterfactuality is a highly studied and well-discussed phenomenon (see e.g. Dahl 1997, Iatridou 2000). I will not present any theory of counterfactuality here, but only provide contexts where a counterfactual reading is existent, and show how it is expressed in Swedish.

Imagine a situation where a condition exists or existed for a certain event to occur. A counterfactual context is a context describing a situation where this condition is or was not met; the condition may be implicit or explicit. As a consequence the event does or did not occur. In Swedish, like in many other languages, counterfactuality is expressed with past form(s). Following Larsson (2009), I will assume that two verb forms are equipped with a feature [+past]: the preterit and the past participle. In order to express counterfactuality in the present or the future time, at least one [+past] form must be used. In Swedish, we can either use the preterit of the main verb, or we can use the complex [preterit auxiliary *skulle* + infinitive of the main verb]:<sup>3</sup>

- (6) a. I så fall stod jag inte här.  
 in that case stood-PRET I not here  
*'In that case, I would not stand here.'*
- b. I så fall skulle jag inte stå här.  
 in that case should-PRET I not stand-INF here  
*'In that case, I would not stand here.'*

<sup>2</sup> In standard Swedish *måste* lacks an infinitive form.

<sup>3</sup> *Skulle* is the same modal as discussed in this article, but in this construction it has no deontic meaning. In SAG its meaning is described as “hypotetisk epistemisk” (‘hypothetic epistemic’; SAG 4:314-315).

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In both cases the implication is that the subject referent does stand “here.” Counterfactuality in the present or the future time can also be expressed with two [+past] forms. However, to achieve counterfactuality in the past time two [+past] forms are obligatory. Again, two alternatives exist: Either [preterit *hade* + the past participle of the main verb] or [(the periphrastic auxiliary) *skulle ha* + the past participle of the main verb]:

- (7) a. I så fall hade jag inte stått här/där.<sup>4</sup>  
 in that case had-PRET I not stood-PTC here there  
 ‘In that case, I would not have stood here/there.’
- b. I så fall skulle jag inte ha stått här/där.  
 in that case should-PRET I not have-INF stood-PTC here there  
 ‘In that case, I would not have stood here/there.’

The two [+past] forms in (7), which are necessary for past time reference, are the preterit form of the auxiliary (*hade* or *skulle*) and the past participle of the main verb (*stått*). Example (8) is meant to illustrate that the past participle really contains a [+past] feature and that two [+past] forms are obligatory to express counterfactuality in the past time. In (8), the unfulfilled condition has been explicit stated in the conditional clause, which is marked for counterfactuality with the past perfect. The condition-dependent situation is depicted in the matrix clause and is likewise marked for counterfactuality. However, the reference time (present or past) is dependent on the number of [+past] forms:

- (8) a. Om jag hade varit student 1968,  
 if I had-PRET been-PTC student 1968  
 skulle jag stå på barrikaderna.  
 should-PRET I stand-INF on barricades-DEF  
 ‘If I had been a student in 1968, I would stand on the barricades.’ (today/\*1968)
- b. Om jag hade varit student 1968,  
 if I had-PRET been-PTC student 1968  
 skulle jag ha stått på barrikaderna.  
 should-PRET I have-INF stood-PTC on barricades-DEF  
 ‘If I had been a student in 1968, I would have stood on the barricades.’ (today/1968)

Example (8b), displaying two [+past] forms, is ambiguous in that it can refer to either the present or the past time. (8a), on the other hand, contains only one [+past] form, *skulle*, which is the reason why only the present time reading is available.

Now, if the participle has a feature [+past], we should be able to predict that an auxiliary in the present tense can express a counterfactual meaning for present or the future time, if combined with a past participle. However, this predication is not borne out:

<sup>4</sup> The choice between *här/där* ‘here/there’ in (7) is intended to create a present and past time reference, respectively.

- (9) a.\* Om jag putsade skorna,  
 if I polished-PRET shoes-DEF  
 ska jag ha varit mer presentabel.  
 shall-PRES I have-INF been-PTC more presentable  
 Intended meaning: *'If I polished my shoes, I would be more presentable.'*
- b.\* Om Peter var här nu,  
 if Peter was-PRET here now  
 kan han ha hjälpt oss.  
 can-PRES he have-INF helped-PTC us  
 Intended meaning: *'If Peter were here now, he would be able to help us.'*
- c.\* Om jag putsade skorna,  
 if I polished-PRET shoes-DEF  
 har jag varit mer presentabel.  
 have-PRES I been-PTC more presentable  
 Intended meaning: *'If I polished my shoes, I would be more presentable.'*

The examples in (9) are not ungrammatical because the verb complexes *ska ha varit*, *kan ha hjälpt*, *har varit* are unacceptable; they are indeed perfectly grammatical in factual contexts, where the former can even carry an epistemic interpretation. I have no explanation as to why the [+past] form of the participles in (9) is not enough, so to speak, to induce counterfactuality. Intuitively, it is the present form that ties the denoted event to a “now” (or “always”) situation so unambiguously that the event will always be interpreted as factual.<sup>5</sup>

We are now in a position to return to the questions raised above, which will be the topic of the next section.

#### 4. Modal auxiliaries and *hade/ha* in counterfactual contexts

Recall that the examples in (1), (3) and (4) have a counterfactual reading in common: Regardless of the ordering of the auxiliaries, the speaker presupposes that the denoted event by the main verb did not occur. As exemplified in section 2, a counterfactual reading may be the result of [*hade* ‘had’ + participle], where the action denoted by the participle is presupposed to be untrue (see example 7a). Applied to (1a), here repeated as (10a), this means that the ability/possibility did not exist.

- (10) a. Han hade kunnat hjälpa mig.  
 he had-PRET could-PTC help-INF me  
*'He could have helped me.'*

<sup>5</sup> By virtue of a purely “mathematical” application of the counterfactuality-marking mechanism, the present form should be able to express counterfactual future situations. However, it does not, but rather the opposite is true: The present form can express future in Swedish, with a strong inference that the event really will occur (cf. Christensen 1997:27ff.). This again suggests a strong connection between present tense form and factual reading. I will leave this for future research.

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Since the ability/possibility did not exist, the event depending on the subject referent's ability/possibility did not occur either, hence the implication 'he did not help me.'

Still, this analysis of the counterfactual meaning in (10a) might not be the whole story. It is based on an implicit unfulfilled condition 'if he had had the ability/possibility.' But this condition is something we obtain from the (linguistic or extra-linguistic) context rather than from the utterance *per se*. A person uttering (10a) could just as well intend it to be an accusation in the sense of 'he had both the ability and the possibility, and yet he did not help me!' In this case, the implicit unfulfilled condition would be 'if he had wanted to help me.' Nevertheless, the inference is still the same, i.e. 'he did not help me.' My conclusion is that the interpretation of *hade kunnat* relies on an implicit unfulfilled condition which is visible (or ambiguous) in the context: Due to the subject referent's lack of ability and/or possibility and/or willingness the object referent did not get any help.

The counterfactual meaning of (1b), here repeated as (10b), is the same as in (1/10a), i.e. 'he did not help me:'

- (10) b. Han kunde ha hjälpt mig.  
 he could- PRET have-INF helped-PTC me  
 'He could have helped me.'

This interpretation is obtained differently, however. The preterit form *kunde* 'could-PRET' places the ability/possibility in past time, and the past participle *hjälp* 'helped-PTC' adds a counterfactual meaning. Therefore (10b) will have the same counterfactual meaning as (10a), but it is achieved through a different mechanism.

The deontic modals *böra* 'ought' and *skola* 'shall' seem to behave quite alike. The relevant examples are repeated in (11/12):

- (11) a. Han hade bort vara färdig i torsdags.  
 he had-PRET ought-PTC be-INF finished last-Thursday  
 b. Han borde ha varit färdig i torsdags.  
 he ought-PRET have-INF been-PTC finished last-Thursday  
 'He should have been done last Thursday.'

- (12) a. Finska båten Oihinna [...] hade skolat [...] vara här klockan 9.  
 Finnish ship-DEF Oihinna had-PRET should-PTC be-INF here clock- DEF 9  
 'The Finnish ship Oihinna should have been here at 9 o'clock.'  
 b. Båten skulle ha varit här klockan 9.  
 ship-DEF should-PRET have-INF been-PTC here clock- DEF 9  
 'The ship should have been here at 9 o'clock.'  
 c. Så hade den skullat se ut enligt mig.  
 so had-PRET it should-PTC look-INF PRT according me  
 'In my opinion, it should have looked like this.'

In none of these sentences the speaker presupposes the non-existence of a recommendation or obligation (henceforth: the “norm”). In (11a) and (12a,c) this is somewhat unexpected, since the order [*hade* + past participle] normally gives a counterfactual meaning to the action denoted by the participle (cf. the discussion around example 7 above). But recall the discussion about (10a) above, where I showed that what is presupposed to be untrue is actually dependent on how we interpret the implicit unfulfilled condition. In the case of the ability/possibility modal *kunna* it could be its modal meaning (ability/possibility) or some other contextually given meaning (willingness). What is presupposed as untrue in (11a), (12a,c) is obviously not the modal meaning, but something else. I think that the meaning of modals used with present time reference is of relevance here. *Borde* ‘ought-RET’ and *skulle* ‘should-RET’ are formally preterit forms, but they can also be used with present time reference. The recommendation or obligation will then appear weaker, as if the speaker suspects or accepts that the norm will not be followed (cf. SAG 4:293):

- (13) Han borde klippa sig.  
 he ought-RET cut-INF REFL  
 ‘He ought to get a haircut (but I suspect that he will not).’

For example (13), we can imagine an implicit unfulfilled condition ‘if he would respect my wishes or recommendations.’ Thus, a norm is established, but at the same time the speaker admits that it might not be applicable. I think that a similar kind of implicit unfulfilled condition in the past is present in (11a) and (12a,c). Hence, the counterfactuality does not target the norm, but instead its applicability in the situation described, and, as a consequence, the action denoted by the main verb is denied.

The interpretation of the verb complexes in (11b) and (12b) is parallel to what we saw in (10b): The preterit forms of the modals (*borde* ‘ought-RET’ and *skulle* ‘should-RET’) places the modality in the past time, and the past participles (*varit* ‘been-PTC’) provide the counterfactual meaning. Again, the alternatives will get about the same interpretations, but through different mechanisms.

Depending on the context, the examples (10-12) may also have a present time reference. This is actually the case with the authentic example (12c). Since two [+past] forms can trigger counterfactuality in the present time (see 7a), this is expected.

Finally let us turn to *måste* ‘must.’ Like *böra* ‘ought’ and *skola* ‘shall,’ *måste* has a deontic root meaning. Apart from that, there are a number of differences between *böra* and *skola* on the one hand and *måste* on the other, the lack of ordering variability in counterfactuals being just one of them. One important difference is that the form *måste* can have either a present or a past time reference. Reconsider example (5), here repeated as (14):

- (14) a. I så fall hade han måst ta paraplyet.  
 in that case had-RET he must-PTC bring-INF umbrella-DEF  
 ‘In that case, he would have had to bring the umbrella.’



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- b. I så fall måste han ha tagit paraplyet.  
in that case must-PRES/PRET he have-INF brought-PTC umbrella-DEF  
'I am fairly sure that he (had) brought the umbrella.'

In (14a) we find a counterfactual meaning, whereas (14b) can only receive an epistemic meaning. Consider first (14a). As argued above, in the parallels with *böra* (11a) and *skola* (12a,c), the speaker does not deny the norm, but rather its applicability in a given situation. This is not the case in (14a). What is denied here is actually the obligation 'to have to bring the umbrella.' In other words, the counterfactuality actually targets the modality, as we saw was possible with *hade kunnat* (had-PRET could-PTC; 10a). By inference (you only do what you have to do) the hearer concludes that the subject referent did not bring the umbrella. However, in my judgment this is not a very strong inference, and it may be cancelled:

- (15) Så tur att det inte regnade.  
such luck that it not rained  
Då hade han måst ta paraplyet.  
then had-PRET he must-PTC take-INF umbrella-DEF  
Nu gjorde han det ändå, för säkerhets skull.  
now did he that nevertheless for safety's sake  
'How lucky he was that it did not rain. If it had rained he would have had to bring the umbrella.  
Now he did it anyway, just to be sure.'

This is not the case with *böra* and *skola*, where the counterfactuality targets the main verb action and may not be cancelled:

- (16) Hans tidsschema var pressat.  
his schedule was tight  
Han hade bort vara färdig i torsdags.  
he had-PRET ought-PTC be-INF finished last-Thursday  
# Och det var han verkligen också.  
and that was he actually too  
'His schedule was tight. He should have been done last Thursday. And he actually was.'

The reason why *måste* does not behave like *skola* and *böra* in this respect is probably the following: Like *böra* and *skola*, *måste* has strong obligation meaning, but unlike *böra* and *skola*, the same form is used both for the present and the past time.<sup>6</sup> The option of making the obligation weaker and less harsh by using the preterit with a present time reference does not exist (cf. 13). This, in turn, means that no unfulfilled condition is implied in an utterance like (17):

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<sup>6</sup> Note that many speakers actually do not accept the past time reference.

- (17) Han måste klippa sig.  
 he must-PRES/PRET cut-INF REFL  
 'He must get a haircut.'

Then, by hypothesis, the mechanisms working to achieve the counterfactual meaning in (11a) and (12a,c) – an existing but not applicable norm – are not active in (14a).

Why then is the counterfactual reading not possible in (14b)? Above, I suggested that the verb order [modal-PRET + *ha*] places the modality in past time and that the counterfactual reading is added by the [+past] feature of the participle following *ha* (see the analysis of examples 10b, 11b, 12b). One possible reason why (14b) cannot get counterfactual meaning could be that the form *måste* is less intuitive with a past time reference. I do not think that this is correct, though, because *måste ha* can undeniably have a purely temporal and factual meaning:

- (18) Hans tidsschema var pressat.  
 his schedule was tight.  
 Före nästa torsdag måste han ha gjort uppgiften.  
 before next Thursday must-PRES/PRET he have-INF done-PTC assignment-DEF  
 'His schedule was tight. Before next Thursday he was obliged to have finished the assignment.'

In this context, the ambiguous form *måste* receives a past reading, and crucially enough, the meaning is not counterfactual.

Instead, an alternative answer is based on yet another difference between *måste* and the other modals. When *kunde* 'could-PAST' is used with past time reference, there are no inferences as to whether the action actually took place or not (cf. SAG 4:289):

- (19) Han kunde komma.  
 he could-PAST come-INF  
 'He could come (and he actually came/but he did not come).'

When *skulle* 'should-PAST' or *borde* 'ought-PAST' are used with past time reference, there is a strong inference that the action did not take place:

- (20) Han skulle / borde städa hela dan igår.  
 He should-PAST ought-PAST clean-INF whole day-DEF yesterday  
 'He should clean the whole day yesterday (– that was the plan/the obligation, but he did not do it/  
 #and he actually did do it).'

Presumably, the same kind of mechanism that we saw in (11a) and (12a,c) is at work here: The norm existed, but was not followed, and therefore we have an implicit unfulfilled condition 'if the norm had been followed.'

In contrast, when *måste* is used with a past time reference, there is a very strong inference that the action did take place – this might even be a fully conventionalized implication (cf. SAG 4:310):

- (21) Han måste städa hela dan igår.  
 he must-PRES/PRET clean-INF whole day-DEF yesterday  
 ‘He had to clean the whole day yesterday.’

In (21) it would sound superfluous to add *och det gjorde han faktiskt* ‘and he actually did’ and close to contradictory to add *men det gjorde han inte* ‘but he did not.’ Thus, the action denoted by the verb embedded under *måste* with past time reference cannot be denied. This, I argue, is the reason why a counterfactual interpretation is not possible in (14b).

## 5. Concluding remarks

In this paper, I have investigated four modal auxiliaries in combination with the anterior auxiliary *ha* ‘have’ in Swedish. The focus has been on counterfactual contexts, i.e. contexts where a [+past] form is not interpreted temporally or epistemic, but rather counterfactually, in that the speaker denies the truth of denoted event. Such situations emerge when a condition, necessary for the event to take place, is not met; the condition may be implicit or explicit. In such contexts, the ordering of the two auxiliaries seem to be free for *kunna* (ability/possibility), *skola* (strong obligation), and *böra* (strong recommendation), but not for *måste* (strong obligation). I have tried show that the ordering is actually not free. Syntax provides the possibility to form either the order [finite forms of the modals + infinitive *ha* + past participle of the main verb] or the order [finite forms of *ha* + past participle of the modals + infinitive of the main verb]. Semantic properties of the modals *kunna*, *skola* and *böra*, in combination with more or less strong pragmatic inferences, will then cause synonymous meanings to either ordering: In the case of the order [modal-PRET + *ha*], the modality is placed in the past time, and the [+past] feature of the participle triggers the counterfactual meaning. In the case of the order [*hade* + modal-PTC], an implicit condition is inferred: If the subject referent had had the ability/possibility or willingness (*kunna*) or if the norm had been followed (*skola*, *böra*), the action denoted by the main verb would have occurred. In both cases, the interpretation will be the same, i.e. the action denoted by the main verb did not occur. *Måste* differs from *skola*, *böra* in a number of respects: First, *måste* is not used in the sense ‘a norm exists, but I suspect that it will not be followed.’ The order *hade måst* therefore places a counterfactual meaning on the modality, not the applicability of the norm. Second, it is a more or less conventionalized implication that the action denoted by the main verb actually took place. Therefore, the order *måste ha* will not receive a counterfactual interpretation. In sum then, we can see that different semantic and pragmatic properties of the modals under investigation account for the different possible interpretations.

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